

Section 880—Water

880.1 General Description

This section includes the requirements for water used in Portland cement mixtures.

880.1.01 Related References

A. Standard Specifications

General Provisions 101 through 150.

B. Referenced Documents

AASHTO T 26

AASHTO T 71

ASTM C 403

[GDT 26](#)

880.2 Materials

880.2.01 Water for Portland Cement Mixtures

A. Requirements

Use water that is reasonably clear without oil, salt, acid, alkali, organic, and other injurious substances.

The Department may allow drinking water that is used for ordinary household use without testing it.

Do not use water from shallow, muddy, or marshy surfaces. Test and approve all other sources before using them.

When the source of water is relatively shallow, ensure that the source depth and intake exclude silt, mud, grass, and all other foreign material.

Do not use water with detergents that will entrain air in Portland cement concrete.

Do not use water with impurities above the following limits:

Impurity	Concentration
Acidity or alkalinity calculated in terms of calcium carbonate	0.05%
Total organic solids	0.05%
Total inorganic solids	0.05%
Sulfate (SO ₄)	0.05%
Chloride	0.01%

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

The Department will reject any water that, when compared with accepted water, shows any indication of unsoundness, marked change in time of set, or reduction of more than 10 percent in mortar strength.

Test as follows:

Test	Method
Quality of water, solids ppm	AASHTO T 26
Setting time of concrete mixtures	ASTM C 403
Mortar making properties	AASHTO T 71
Air content of concrete	GDT 26
SO ₄ ppm, Alkalis, ppm	ASTM D 516

Section 880—Water

Test	Method
Cl, ppm	AASHTO T 260

D. Materials Warranty

General Provisions 101 through 150.

880.2.02 Recycled Wash Water

A. Requirements

Recycled Wash Water shall conform to AASHTO M 157 and meet the following requirements:

Chemical Designation	Limits	Test Method
SO ₄ , ppm	3000	ASTM D 516
Alkalis, ppm	600	ASTM D 516
Total Solids, ppm	50,000	AASHTO T 26
Cl, ppm	600	AASHTO T 260

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Conduct test methods according to the following:

Quality of Water, Solids, ppm	AASHTO: T26
Setting Time of Concrete Mixtures	ASTM: C 403
Mortar Making Properties	AASHTO: T 71
Air Content of Concrete	GDT: 26
SO ₄ , ppm, Alkalis, ppm	ASTM D 516
Cl, ppm	AASHTO T 260